



CFP2000 Result

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IBM

IBM eServer 326m, 2.6 GHz Dual Core AMD Opteron(tm) Processor 285

SPECfp2000 = 2095

SPECfp_base2000 = 1904

SPEC license #: 11 | Tested by: IBM Corporation | Test date: Mar-2006 | Hardware Avail: Apr-2006 | Software Avail: Feb-2006

Benchmark	Reference Time	Base Runtime	Base Ratio	Runtime	Ratio	
168.wupwise	1600	61.0	2622	55.4	2887	
171.swim	3100	129	2409	121	2566	
172.mgrid	1800	106	1693	97.6	1845	
173.applu	2100	107	1970	92.6	2269	
177.mesa	1400	66.7	2099	61.5	2275	
178.galgel	2900	93.5	3101	82.8	3502	
179.art	2600	108	2400	75.6	3439	
183.earthquake	1300	86.4	1504	76.9	1690	
187.facerec	1900	76.2	2494	76.9	2472	
188.amp	2200	147	1492	138	1597	
189.lucas	2000	102	1954	91.7	2181	
191.fma3d	2100	131	1600	131	1607	
200.sixtrack	1100	126	871	121	911	
301.apsi	2600	158	1647	150	1737	

Hardware

CPU: AMD Opteron(tm) Processor 285
CPU MHz: 2600
FPU: Integrated
CPU(s) enabled: 4 cores, 2 chips, 2 cores/chip
CPU(s) orderable: 1,2
Parallel: No
Primary Cache: 64KBI + 64KBD on chip
Secondary Cache: 1024KB (I+D) on chip
L3 Cache: N/A
Other Cache: N/A
Memory: 8 x 1024MB, PC3200
Disk Subsystem: SCSI, 36GB 15K RPM
Other Hardware: None

Software

Operating System: SuSE Linux 9.0 SP2 SLES 64 bit Kernel 2.6.5-7.191-smp (SP2)
Compiler: PathScale EKO Compiler Suite, Release 2.3
AMD Core Math Library 3.0.0
File System: Linux/reiserfs
System State: Multi-user, run level 3

Notes/Tuning Information

Tested by IBM Corporation

+ACML: Linked with AMD Core Math Library

Base tuning for C programs: -Ofast -WOPT:mem_opnds=on +FDO

Base tuning for FORTRAN programs: -Ofast -LNO:fusion=2 -OPT:fast_complex=on +FDO

Portability flags:

178.galgel: -fixedform

Peak tuning:

168.wupwise: -Ofast -LNO:prefetch Ahead=5:prefetch=3
-OPT:unroll_times_max=8:unroll_size=128:IEEE_NaN_Inf=off:ro=3
-IPA:linear=on:plimit=50000:callee_limit=5000

-INLINE:aggressive=on

171.swim: -Ofast -CG:local_fwd_sched=on -LNO:fusion=2 -m3dnow

172.mgrid: -Ofast -CG:gcm=off -OPT:IEEE_a=3:unroll_size=200

-LNO:fusion=2:fission=1:blocking=off:prefetch Ahead=2

-WOPT:mem_opnds=on:aggstr=0

173.applu: -Ofast -CG:local_fwd_sched=on -OPT:ro=3 -TENV:X=3

-LNO:fusion=2:fission=2:full_unroll_size=10000:prefetch=3

Standard Performance Evaluation Corporation

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Notes/Tuning Information (Continued)

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+FDO
177.mesa: -O2 -ipa -OPT:Ofast -fno-math-errno -CG:local_fwd_sched=on
          -WOPT:mem_opnds=on +FDO
178.galgel: -Ofast -OPT:fast_complex=on +ACML +FDO
179.art: -O3 -OPT:Ofast -fno-math-errno -mno-sse2 -m32
183.quake: -Ofast -CG:load_exe=2 -WOPT:mem_opnds=on -m32 +FDO
187.facerec: -Ofast -LNO:fusion=2
          -OPT:fast_complex=on:IEEE_NaN_Inf=off:unroll_size=0 +FDO
188.ammp: -O3 -OPT:alias=disjoint:unroll_times_max=8:Ofast:ro=3
          -fno-math-errno -TENV:X=4 +FDO
189.lucas: -Ofast -OPT:ro=3:fast_nint=off:unroll_size=256
          -WOPT:mem_opnds=on +FDO
191.fma3d: -O2 -ipa -CG:load_exe=1 -OPT:Ofast:IEEE_arith=3:ro=3
          -WOPT:mem_opnds=on:retype_expr=on -IPA:pu_reorder=1 +FDO
200.sixtrack: -O3 -OPT:Ofast:Olimit=6000:early_intrinsics=on
          -fno-math-errno -CG:load_exe=1 +FDO
301.apsi: -Ofast -CG:load_exe=0 -LNO:prefetch=0:simd=2

```

BIOS Configuration Notes

Node Interleaving is Disabled

Other Configuration Notes

Taskset utility used to bind process to CPU(s)